

#### Practical-4

AIM: Setup and configure a LAN (Local area network) using switch and Ethernet cables in your lab.

#### LAN:

A local area network refers to network that connects devices within limited area, such as office building, school, home. It enables users to share resources, including data, printers, internet access.

#### How to set up LAN.

Step 1: Plan and design appropriate network topology taking into account network requirements and equipment location.

Step 2: you can take 4 Computers, switch with 8, 16, or 24 ports which is sufficient for network of these size and 4 ethernet cables.

Step 3: connect your computers to network switch via an Ethernet cable, which is as simple as plugging one end of Ethernet cable into your computer and other end into your network switch.

Step 4: Assign IP address to your PC's

1. Log on to client computer as Administrator or owner.



2. click network and Internet connection.

3. Right click LAN/Ethernet → Go to properties → select Internet Protocol (TCP/IPv4) → click properties → select use the following ip address option and assign IP address.

Similarly, assign IP address to all PCs connected to switch.

~~the~~ PC1 - IP address: 10.1.1.1, subnet mask 255.0.0.0

PC2 - IP address: 10.1.1.2, subnet mask 255.0.0.0

PC3 - IP address: 10.1.1.3, subnet mask 255.0.0.0

PC4 - IP address: 10.1.1.4, subnet mask 255.0.0.0

Step 5: Configure network switch

1. connect your computer to switch: To access switch's web interface, you will need to connect your computer to switch using Ethernet cable.

2. Log in to web interface: open web browser and enter IP address of switch in address bar. This should bring up login page for switch's web interface.



Enter username and password to log in.

3. Configure basic settings: Once you've logged in, you will be able to configure basic settings for switch.

4. Assign IP address as: 10.1.1.5 Subnet mask 255.0.0.0

Step 6: check connectivity between switch and other machine by using ping command in command prompt of device

step 7: select folder → go to properties → click sharing tab → share it with everyone on same LAN.

Step 8: Try to access shared folder from other's computer of network.

Result :-

Thus LAN (Local Area Network) using switch and Ethernet cables is setup and configured.